



## ARL is an Authority on Nutrition and the Science of Balancing Body Chemistry Through Hair Tissue Mineral Analysis!

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# Mineral Patterns-All-Four-High Electrolytes

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## All-Four-High Electrolyte Pattern

In addition to the oxidation types, there are several other important mineral patterns to consider. One of these occurs when all four of the electrolytes - calcium, magnesium, sodium and potassium - are elevated above the ideal levels.

### Fast, Slow Or Mixed Oxidation

The 'all-four-high electrolyte pattern' may be reported as a fast, mixed or slow oxidizer. What distinguishes the pattern is that all four electrolyte values are elevated. It is often a confusing pattern, because several readings may be 'off the chart'. This makes it a little more difficult to assess visually.

The pattern has features of fast oxidation, namely the elevated sodium and potassium levels, however, it also has features associated with slow oxidation, namely the high calcium and magnesium levels. On careful questioning, many times the client with this pattern has symptoms of both fast and slow oxidation.

### Underlying Slow Oxidation With A Stress Reaction

In our experience with four high electrolytes, underlying slow oxidation is always present. Whenever calcium and magnesium levels are elevated, a person may experience symptoms of slow oxidation.

In the all-four-highs situation, the client also has a *secondary alarm reaction*, which might also be called a *secondary acute stress reaction*. This causes the sodium and potassium levels to elevate.

### Volatility

All-four-high electrolytes is an unstable pattern that will generally progress into slow oxidation. Sometimes the body chemistry of the person with all-four-highs is quite volatile. The sodium and potassium levels fluctuate rapidly.

This tends to be the case when the cause of the secondary stress reaction is a physical, psychological or emotional stress reaction mediated through the sympathetic nervous system. When stress increases, the adrenal glands and thyroid secrete more hormones, raising the sodium and potassium levels.

In other cases, the oxidation rate is less volatile. In these cases, the cause of the high sodium is often the presence of a toxic metal such as cadmium, mercury or even copper that is elevating the sodium level. The toxic metal may not be revealed on the hair test, as the metal may be sequestered in the kidneys or elsewhere.

### Symptoms Of The All-Four-Highs

Usually, the client with all-four-highs will have symptoms of both slow and fast oxidation, either at the same time or alternating. If symptoms alternate, it is because the oxidation rate is changing rapidly. The sodium and potassium levels may rise and fall on a daily or even an hourly basis, depending on energy levels, stress or other factors. The hair analysis, of course, only provides an average reading over three months.

For example, a person may alternate between anxiety when the oxidation rate increases and depression when it slows. This could produce a bipolar condition. Bowel habits may alternate between excessive movements and a tendency for constipation.

In other cases, symptoms may be more constant, but are still often a mixture of fast and slow oxidizer symptoms.

Some individuals with all-four-highs are rather delicate and notice changes in their oxidation rate very quickly.

### Correction Of The All-Four-Highs

Here are a few precautions in the correction of the all-four-high electrolyte pattern. If you suspect a volatile oxidation rate, do not recommend too many supplements that enhance the oxidation rate. If the person is in a delicate balance, such a program could cause increased anxiety and other symptoms of excessively fast oxidation.

If during the course of correction, symptoms such as irritability or anxiety increase, one can surmise that the oxidation rate has increased. One can then reduce supplements such as B-complex, potassium, adrenal and thyroid glandular that tend to increase the oxidation rate. More calcium and magnesium and more fat in the diet may also help reduce the oxidation rate.

If the client begins to feel more tired, sluggish, apathetic or depressed, it is likely the oxidation rate has slowed excessively. In this case, less fat in the diet, adequate protein and adding more B-complex vitamins and Adrenal glandular products may help relieve symptoms of slow oxidation.

These measures may be important as interim measures, until a retest can be performed to determine exactly what changes have occurred in body chemistry.

### The Order Of Reversal

As a client with all-four-high electrolytes improves on a nutrition program, the first change will usually be a decrease in the sodium and potassium levels. This signifies a reduction or elimination of the secondary stress reaction.

The diet and supplement program can help eliminate the stress reaction by;

1. supplying needed nutrients,
2. helping to reduce the burden of toxic metals and
3. improving the energy level to enhance the ability to handle stress. Improving lifestyles - more sleep, adequate exercise and the elimination of stress - may also help reduce the secondary stress reaction.

This usually leaves the client with a slow oxidizer pattern. Some clients may experience depression feelings, a condition that was present, but masked by the secondary stress reaction. Keeping the nutrition program current and reassuring the client that the depression feelings will pass, are often helpful.

There is a principle that it takes energy to feel feelings. Often, feeling and allowing depression feelings are necessary in order to release them and return to better health.

By continuing with the nutrition program and a healthful lifestyle, the oxidation rate will often begin to increase after several months or more and stabilize at a more healthful level. Each person is different and each situation involves many variables. Thus it is not possible to give a precise time needed for correction.

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